

29 February 1960

Director, PIC

THRU:

Chief, TISD *JWC*

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1. During the month of November 1958 several discussions were held concerning the requirement for a precision microscope or enlarger generated by a program which was to make use of high-resolution 70mm negative material. These first discussions involved

Certain basic requirements for this equipment were established during these preliminary and informal meetings:

a. That a fixed ratio of approximately 20 diameters was optimum to exploit the scale and resolution capabilities of the original material.

b. That the equipment be of the vertical design for ease in operation.

c. That the specific capability of the negative would not be less than 150 lines per millimeter.

d. That the instrument would accept film or glass plates in the image plane.

e. That the lens axis would be perpendicular to the image plane to within two minutes of arc.

f. That the mechanics of transporting the film from supply to take up side would introduce no scratches nor abrasions.

g. That a method of static and dust removal from the negative material would be incorporated in the film transport mechanism.

h. That the possibility of using a liquid film gate be completely *completely* explored.

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2. The first meeting on this equipment was held during December 1958 at the [ ] of the [ ] This meeting was attended by [ ]

At this meeting the basic requirements and broad perimeters, as indicated in paragraph 1 of this memo, were discussed. The aforementioned [ ] representatives offered to submit a proposal for consideration within 30 days. During March of 1959 Cmdr. [ ] visited the [ ] Works to discuss some of the details of the proposal as submitted. During July 1959 the undersigned again visited the [ ] to discuss further details of the enlarger. During November of 1959, the undersigned, along with [ ] of the photographic laboratory, spend ten days at the [ ] plant in training on the assembly, calibration, and operation of the first production model. During the months of January and February 1960, three 20X precision enlargers were delivered to PIC and after installing the required venting and exhaust system, the three enlargers were installed in the laboratory. As of this date, one unit has been completely tested and calibrated and is ready for operation and during the next several days, the remaining two units will also be tested and calibrated.

3. It is the purpose of this memorandum to give only an historical background of the development of an idea into actual hardware within a relatively short period of time, based on complete agreement regarding the utilization and performance specifications as generated by a requirement. It is impossible to see in retrospect just who is responsible for what item or feature of this equipment. It was, in every sense of the word, a joint effort on the part of those concerned. The manufacturer of the equipment is to be highly commended for having achieved this final result from performance specifications as furnished by the PIC team and only intermittent guides from this team during the relatively short period of time from engineering board to photographic laboratory.

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